How an unequal intra-firm resources distribution affect market share

Nebojsa S. Davcik
Instituto Universitario de Lisboa (ISCTE-IUL), Business Research Unit (BRU-IUL)
Av. Das Forcas Armadas, 1649-026, Lisbon, Portugal
Assistant Professor of Marketing & BRU Research Fellow
davcik@live.com

&

Nicholas Grigoriou
Department of Marketing – School of Business
Monash University
nicholas.grigoriou@monash.edu

Abstract:

Purpose:

The study addresses how marketing assets and resources of the firm perform under different product (brand) innovation conditions using the dynamic marketing capabilities (DMC) research perspective. The study contributes to the DMC research stream showing the effects and performance of heterogeneous firm drivers and resources. Academic research to date has paid a little attention to the interrelationship between market share as a performance metric, dynamic capabilities, and product (brand) innovation. The current study bridges this knowledge gap by empirically validating the effects of DMC on market share performance output using panel data of retail food brands.

Methodology:
The model was initially fitted with the beta regression analysis and cluster analysis in the second step of the estimation procedure. The results of simulation by Monte Carlo experimentation are discussed.

Findings:
The findings show that firms leverage their marketing capabilities unequally in the multi-brand portfolios, which leads to an unequal intra-firm distribution of assets and resources. The research contributes to the understanding of the brand competitive dynamics and appropriate deployment of assets and resources for improved firm performance.

Originality:
These findings are useful for both academics and practitioners because they address new and future research. In doing so, we advance the firm performance and branding literature with extension in the DMC literature.

Keywords: dynamic capabilities (DC); dynamic marketing capabilities (DMC), market share; firm performance; brand differentiation.

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1. Introduction

Managers are under constant pressure to improve firm performance using the firm's limited resources. Managing firm resources requires the use and transformation of available dynamic capabilities that improve the organizational efficiency and assist the firm to gain a competitive advantage. Dynamic capabilities (DC) are the organizational and strategic routines by which firms achieve new resource configurations as markets constantly change. DC represent the firm's processes that use resources, specifically the processes that integrate, reconfigure, gain, and release resources to match and even create market change (Eisenhardt and Martin, 2000; Teece, 2007; Morgan, 2012). The DC research framework eventually gave rise to the dynamic marketing capabilities (DMC) research stream. The DMC research stream proposes that marketing resources and capabilities together play a unique role in determining the needs of customers, distribution channels and competing products. A common economic gain pursued by firms is market share. Research has shown that market share may enhance a firm's profitability (Park and Srinivasan 1994,) and, from a marketing perspective, market share signals higher value for a consumer (O'Regan, 2002), which in turn improves a firm's brand portfolio status.

Although marketing performance has been the subject of continuing investigation, how marketing capabilities, such as brand equity (BEq), are used to determine market share has received little empirical attention (Priem and Butler, 2001; cf. Srivastava et al., 2001; Davcik and Sharma, 2016; Narteh, 2018). Three reasons explain the gap in this research field. First, marketing scholars not fully accepting the DC approach due to the absence of clear theoretical frameworks of resources in general, marketing assets and capabilities (Day, 2011; Srivastava et al., 2001). However,

empirical research on DC in marketing has attracted some attention in the last decade. For instance, Fang et al. (2011) studied the effects of customer and innovation asset configuration strategies on firm performance, Markovic and Bagherzadeh (2018) analyzed the role of stakeholder co-creation processes and innovation performance, while Hooley et al. (2005) examined market-focused resources and their effects on firm performance. The second reason for the research gap is conceptual, that is, researchers are predominantly interested in specific and behavioristic relationships. For example, Davcik and Sharma (2016) assert the importance of an appropriate unit of analysis in the application of the DC in a marketing context. A typical DC application in management is based on a firm level investigation, whereas in marketing is based on a customer or brand level investigation. In line with this research paradigm, we argue that the DC research in marketing should be focused on intra-firm dynamics, rather than the inter-firm dynamics such as those found in management research. The problem lies in the fact that dynamics of inter-firm relationships consider a general firm-to-firm performance and competition, while the intra-firm dynamics considers the internal firm performance based on its own brand portfolio that is more appropriate for marketing analytics. Finally, methodological reasons explain the gap in the literature, because most of the existing studies employed self-reporting data that have a limited scientific contribution. The two noteworthy exceptions to these reasons are the work of Ramaswami et al. (2009) who examined market-based capabilities and financial performance; and Hooley et al. (2005) who studied market-based and marketing support resources, using a self-reporting study in marketing research. This type of research requires analysis of panel data from existing consumers and brands. Thus, the purpose of this study is to propose and empirically validate a conceptual framework on the role that DMC, based on a firm's innovation activities, have on a firm's market share. Addressing this knowledge gap has both academic and practitioner implications. For the practitioner, differentiation of marketing assets through innovation may require concurrent innovations along the dimensions of customer experience, offerings and presence (Sawhney et al.,

2005) all of which have performance implications for the firm. For academics, we expand the existing DMC knowledge by showing how different brand capabilities can be applied theoretically in the context of market share performance.

The research is applied in the context of Fast Moving Consumer Goods (FMCG) within the food industry. The FMCG industry is particularly relevant for the study of marketing performance issues because of the market is mature, consists of highly competitive product categories, and brand heterogeneity. The example of the food industry is important because of growing trends toward a healthier lifestyle, added value for consumers, new brand developments, production procedures and marketing standards (Sharma et al., 2016).

This paper is structured as follows. Section two provides a discussion on innovation and performance outputs in marketing and resource-based literature, a proposed research framework, methodology, and working hypotheses. Section three discusses the data and descriptions of the variables used in the study. A two-stage model is presented in section four, with detailed descriptions of (i) brand share estimations fitting a beta regression model and Monte Carlo simulation; and (ii) an analysis based on technology and firm types using a cluster analysis. The final section presents the results of the study and concludes with implications for managers and academics.

2. Dynamic marketing capabilities and the performance of brand

DCs are organizational and strategic routines that managers employ to generate new value creation strategies (Teece, 2007; Morgan, 2012). Eisenhardt and Martin (2000, p. 1107) define DC as: the firm's processes that use resources, specifically the processes to integrate, reconfigure, gain, and release resources. DMCs, on the other hand, are the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve and

depreciate. There is a general agreement among marketing scholars (e.g., Keller, 1993; Barrales-Molina et al., 2014; Davcik and Sharma 2016) and strategy researchers (e.g., Priem and Butler, 2001; Srivastava et al., 2001) that brands, when developed effectively and managed well, are valuable firm resources. Brands create a sustainable competitive advantage because they are difficult to imitate (Kor and Mahoney, 2005). Furthermore, DC can improve a firm's financial performance through innovation and differentiation (Priem and Butler, 2001; Srivastava et al., 2001). Innovation is seen as the way to create brand differentiation, as most markets shift toward commodity status with offerings becoming similar (Aaker, 2007). Within research in innovation, there is little discussion of how innovation should be branded. In the innovation literature, *brand innovation* is defined as constantly developing new ideas to keep the brand fresh, relevant and dynamic (Grant 2011). Firms succeed in their markets by offering innovative brands. Conversely, firms can lose their market share if their brand lacks innovation. Firms use brand innovation to launch a brand, revive it, reposition it, update it, attract a new audience or simply keep it alive and vibrant.

Despite the scholarly attention that DC has received within the strategic management and marketing literature, studies have rarely examined the relationship between brand-based resources, DMC and firm performance (Barney, 2014; Barrales-Molina et al., 2014). This is surprising given the emerging nature of DMC research and extensive scholarly attention firm performance has received. We are addressing this knowledge gap by empirically examining how brand equity, marketing investments, and differentiation affect the relative effects of brands on firm performance. Our approach is in line with recent calls in the DC literature for further examination in the field of marketing research. (Barney, 2014; Davcik and Sharma, 2016; Day, 2011; Kozlenkova et al., 2014)

2.1. Dynamic marketing capabilities of assets as drivers of brand performance

DC research examined from a marketing perspective fails to address how market-based resources and capabilities are developed, maintained and perform in a dynamic marketing setting (Day, 2011; Srivastava et al., 2001). Given the complex nature of brands and their use as strategic assets by firms, market-based assets may boost market performance and lower consumer purchase risk (Bao, Bao and Sheng, 2011; Davcik and Sharma 2016). However, little is known about how the capabilities of market-based assets affect current and future market performance (Sun et al., 2019). One such market performance measure is market share. Market share represents the effectiveness-oriented concept of a firm's performance because it is recognized in the literature as a measure of the value delivered to the consumer (cf. Sandvik and Sandvik, 2003). As such, a dominant market share may be achieved if a firm's innovation strategy is superior to the competition (Urban et al., 1986). In general terms, a relatively large market share is a reward for providing better consumer value (O'Regan, 2002) The relationship between market share and consumer value has been recognized by both academics and practitioners (Gates, McDaniel and Braunsberger, 2000).

The role of intra-firm distribution of resources in multi-brand firms is not clear in the literature (Davcik and Sharma, 2016). This is an important theoretical and managerial problem because managers do not always distribute an equal amount of resources and attention to individual brands within a multi-brand portfolio. Instead managers allocate resources on the current or potential (future) performance. Therefore, it is of paramount importance to empirically study the differences in the internal distribution of resources within the brand portfolio and their effects on firm performance outcomes.

2.2. The importance of brand equity and investments in obtaining market share

Against the backdrop of an established framework for DC, and using DMC as a prevailing research paradigm, the current study attempts to identify and empirically validate drivers such as the BEq and marketing investments relationship in delivering firm performance. BEq's empirical validation as a driver of competitive advantage and firm performance has been examined from a financial perspective, e.g., marketing investments (Simon and Sullivan, 1993) and a customer based perspective (Keller, 1993). Further, BEq has empirically proven to assist in delivering firm performance (Lassar, Mittal and Sharma, 1995; Narteh, 2018).

Drawing on the findings of previous empirical studies, market share can be increased either by enhancing the perceived value of brands or by reducing the price (O'Regan, 2002; Urban et al., 1986). For instance, Park and Srinivasan (1994) explicitly address the importance of the impact and influence of BEq on market share. Enhancements to the perceived value of brands can be achieved through higher BEq and marketing investments in brand's related processes and activities (O'Regan, 2002; Urban et al., 1986).

Despite receiving substantial attention among scholars, there is no consensus on how to develop a unique measure of brand equity or what the drivers of the BEq performance are (Davcik et al., 2015). Academic debate is very intense regarding the conceptualization of the appropriate theoretical and measurement approach in BEq (Veloutsou and Guzmán, 2017). The driving forces behind this debate are the various research approaches that define different, and in many instances, conflicting measurement approaches and research assumptions such as customer-based, market-based, and finance-based (cf. Davcik et al., 2015; Veloutsou and Guzmán, 2017). Since there is little consensus in the literature on the best approach to measurement, this study adopts the financial-based approach in conceptualizing the BEq. This stream of the BEq research asserts the importance

of financially based measurement and valuation of brand value (e.g., Kamakura and Russell, 1993; Simon and Sullivan, 1993).

The literature recognize marketing investments in a brand as expenses that are intended to increase the quality and reputation of the brand (Davcik and Sharma, 2015). These expenses are related to expenditures in brand and promotional activities (Keller and Lehmann, 2009; Simon and Sullivan, 1993). Further, these marketing investments have important effects on brand performance (Rust et al., 2004). For a firm, a lucrative position in the market can yield premium prices and market share. Well-developed marketing investment plan should be balanced between investments horizons, growth goals and acceptable risk. The practitioner literature (e.g. Court et al., 2005; Spary, 2015) suggests that marketing investment will optimize the number of investments within the firm's brand portfolio and levels of investments to increase a brand's market share. This market mechanism can also provide an entry barrier for companies who must overcome the incumbent competitors (Chu and Keh, 2006). This inter-correlation is a result of higher brand differentiation due to marketing investments in brands and brand proliferation, which consequently, creates an entry barrier against competition (cf. Chu and Keh, 2006).

Thus, we propose:

H1: The likelihood of gaining a market share increases by an increase of brand equity and distinctive marketing investments in the brand.

The impact of marketing investment on brand performance is not broadly understood and lacks a common standard for measuring its contribution to remain competitive. Today, marketing managers are responsible for managing all brand stakeholders and marketing processes. The practitioner literature (Court et al., 2005) asserts that managers are accountable for returns on investments in marketing assets, new media, competitive intelligence and analysis, technological solutions to remain competitive. This extended role of marketing affects both the organizational and investment

processes within a firm, and the existing brand portfolio performance, value expressed in BEq and consumers.

Firms will fail in reaching their brand performance goals (i.e., higher market share, price premiums) if they are not able to make efficient decisions on optimal investment allocation of their assets, resources, and management of brand equity in multi-brand environment (Davcik and Sharma, 2016; Cacciolatti and Lee, 2016). Marketing investments in brands will protect a firm's brand against losses of market share (cf. Keller and Lehmann, 2009). Therefore, the interaction between BEq and marketing investment should yield higher levels of market share due to the tendency that higher-quality brands generate a higher market share than lower-quality brands with the same level of marketing investments. However, this marketing mechanism should be approached with caution. A firm may invest heavily in marketing activities and processes, but still not to gain a higher level of market share. Thus, marketing investments in brands that are associated with high brand value may gain higher levels of market share. We propose:

H2: There is a positive interaction between brand equity and marketing investments.

2.3. The importance of differentiation in market share research

A common means by which firms achieve superior performance is through the development and marketing of differentiated brands (Zott and Amit, 2008). Differentiation and innovation are important drivers of branding because they shape a brand's performance (Davcik and Sharma, 2015). Differentiation involves creating a brand that is perceived to be unique and distinctive in comparison to others on offer (Porter, 1998).

Successful brands in the market are characterized by higher brand value differentiation in comparison to less distinctive brands (Knox, 2000). Through differentiated brands, firms create an appropriate level of market-based value that assists in the development of brand equity. Our study

uses firm type as a control variable of brand performance outputs. Similarly, the difference between private-label brands, national and international food producers will be controlled.

The market (brand) share premium shows how much of a brand's current market share is related to the value of the brand when the price is *caeteris paribus* (Park and Srinivasan, 1994). Firms that successfully manage brand values will gain market benefits such as capacity utilization (Sandvik and Sandvik, 2003), larger market share and a premium price. Further, successfully applied brand innovations assist in holding the existing price levels or creating a monopoly for longer periods of time (Hanna and Dodge, 1995). Brand differentiation can be achieved by the application of different innovation types, such as technology and production standards applied in the creation of a brand (Davcik and Sharma, 2015). To explain this, Bezawada and Pauwels (2013) discuss the problem of different food categories and their implication on marketing assets such as price or sales, but do not explain what the drivers of these phenomena are. Stringent organic food standards that are based on different level of innovativeness make clear technological, production and marketing differentiation in comparison to the conventional and functional food brands. Successful innovation will give added value to consumers. However, added value cannot be created without distinctive technological and marketing innovation (Doyle, 2000). In light of this, we propose:

H3: The greater the investment in brand innovativeness, the greater the increase in market share.

3. Dataset

Several data sources have been used in this study. First, we used scanner data from ACNielsen research into the food buying patterns of Italian households. Different variables that describe consumption and market behavior, such as price, market share, brand volume and qualitative behavior of brands were extracted from the data. To obtain data from ACNielsen, the Consumer Panel Solutions (CPS) and Homescan® panel tool were used. Second, data obtained from the

Amadeus financial statements database on Italian companies were used. The research framework

has been expanded to include quality-independent variables based on technology applied and

qualitative characteristics of these brands.

The dependent variable is brand share. Brand share represents the market share of a unique brand

in the market. Price represents the amount of money that consumers paid for a product in a store,

aggregated at the brand level. BEq represents an asset that is calculated by a firm's patents and

licenses. BEq is an intangible asset on firms' balance sheets. This measurement approach is in line

with Urban et al. (1986) and Park and Srinivasan (1994, p. 272) as it allows for estimation and

"managing an individual brand in a multi-brand firm operating in multiple product categories."

Marketing investments represent lagged investments in the reputation of a brand. The literature

suggests that marketing resources (i.e. advertising expenses) are related to the performance of a

brand as the ratio of marketing-related expenses to total sales (e.g., Tseng et al., 2007; Fernandez-

Olmos and Diez-Vial, 2013). For instance, Simon and Sullivan (1993) criticize the use of overall

expenses ratio to sales approach and recommend using advertising expenses on the brand level as a

better research approach. The applied indicator is a better performance measure because it captures

the individual effect in brands (Simon and Sullivan, 1993; Davcik and Sharma, 2015).

Price is a control variable in our model. Setting an appropriate price is vital for the maintenance

of market share. Price reductions are short-term measures that will increase market share and are

likely to be followed by similar actions from competitors (O'Regan, 2002; Urban et al., 1986).

Firm type and innovation type have been used as quality-independent variables (Sharma et al.,

2016). Firm type represents quality differences among private-label or retail brands, brands that are

managed by the Italian SME producers and brands that are managed by multinational companies.

The innovation type represents a different level of innovativeness. These variables are differentiated

according to the applied technology, such as conventional brands with added value, organic brands

and functional food brands. Dummy variables were assigned to study the behavior of applied

technology. This is possible with the behavior estimations of the organic and functional brands in comparison to conventional brands.

The health-enhancing food brands are the focal point of the current study because they are mainstream products in the packaged food industry, characterized by high levels of applied technology, marketing know-how, and ethical consciousness. Differentiation between the enriched-food brands and conventional brands lies in the added value of production, marketing, and technology. Health-enhancing food has been defined as food that provides health benefits beyond its primary nutritional functions (Bogue and Sorenson, 2001), and includes a broad category of healthy products such as organic, functional and added value foods (Davcik and Sharma, 2015). The innovation domain in the dataset is represented by conventional juices, milk, and yogurts with added value, such as added vitamins, as well as functional and organic food brands.

Our research framework uses quality-independent variables that have been defined and created as a combination of existing empirical data (cf. Einav et al., 2010) and brand quality characteristics, based on firm and innovation types (Davcik and Sharma, 2015). This study used 753 brand samples (juices, milk, and yogurt).

4. Model development and results

4.1. Model

A popular technique for estimating market share related phenomena is regression analysis (e.g., Einav et al., 2010). The beta regression model was fitted because a standard *ordinary least square* (OLS) estimation would produce biased results. The R-squared and adjusted R-squared values have been reported to provide goodness-of-fit indicators of regression. The logarithmic transformation of several variables (brand equity and marketing investment) was conducted during the estimation

process. This change was applied to minimize the potential estimation discrepancies because of a large range of values in the dataset.

A continuous dependent variable was used. We applied a parameterization of the beta law which is applicable for the continuous dependent variable (y) and limited to the interval, $y \in (0,1)$. The beta distribution of a dependent variable is appropriate for the continuous measurement on the standard unit interval, $0<y<1$, and beta density. Following Ferrari and Cribari-Neto (2004), let $\varphi=n/(n+s)$ and $\omega=n+s$, where $n>0$, $s>0$ and $\Gamma(\cdot)$ is the gamma function. The beta density of y can be written as the function:

$$(1) f(y; \varphi, \omega) = \frac{\Gamma(\omega)}{\Gamma(\varphi\omega)\Gamma((1-\varphi)\omega)} y^{\varphi\omega-1}(1-y)^{(1-\varphi)\omega-1}, 0<y<1$$

where $0< \varphi <1$ and $\omega>0$; and variance can be written as $var(y) = \frac{V(\varphi)}{1+\omega}$, where $V(\varphi)= \varphi+(1- \varphi)$. Ferrari and Cribari-Neto (2004) found that the beta densities can be symmetric for $\varphi=\frac{1}{2}$ and asymmetric for $\varphi\neq\frac{1}{2}$. Market share was regressed on brand equity, marketing investments and controlled for price, firm and innovation type in line with hypotheses H1 and H2.

The basic brand performance model is represented by:

(2) Ymarketshare$_b = \beta_1$ln (brand equity)$_b + \beta_2$ln (marketing investments)$_b + \delta_1$dummy company's type (private label)$_b + \delta_2$dummy company's type (Italian)$_b + \delta_3$dummy company's type (foreign)$_b + \delta_4$dummy innovation type (conventional)$_b + \delta_5$dummy innovation type (organic)$_b + \delta_6$dummy innovation type (functional)$_b + \delta_7$price$_b + u_b$

Where $b=1,…,B$ (brands). β and δ are the parameters that will be estimated under the assumption that the variance of the error term u_b is constant and conditional on regressors. The marginal effects

of the independent variables on brand price are measured by the β coefficients. In line with these effects, parameters δ measure the marginal effects of the quality independent variables on brand price. We applied several econometric techniques in order to control for the robustness of our modeling. We controlled for possible multi-collinearity problems, reverse causality, statistical power and fit of competing models. We used the Stata regression collinearity diagnostic to test the variance inflation factors (VIFs) for all independent variables. We discuss these control instruments in the Results section.

Simulation by Monte Carlo experimentation is a powerful methodological tool for exposition and illustration of complex econometric models (Cameron and Trivedi, 2009). We are interested in investigating the robustness and consistency of an estimated model. We apply a class of Monte Carlo simulation method in which the performance of $\hat{y}$ on several random draws was simulated. We follow procedures of Cameron and Trivedi (2009) and use *estsimp* algorithm that is a part of Clarify by King et al. (2000), a suite of Stata programs for interpreting statistical results.

The cluster analysis was used to explain brand differentiation. In doing so, we introduced innovation effects along with the influence of firm type on market share. The two-step clustering component method was used, which is a scalable analysis method created to manage huge datasets (Davcik and Sharma, 2015). The clustering methodology utilizes a deductive reasoning approach because of the number and suitability of cluster variables (Ketchen and Shook, 1996) and to the use of non-hierarchical algorithm (Davcik and Sharma, 2015). The extant literature on data modeling (e.g., Ketchen and Shook, 1996) suggests that a two-step clustering procedure is the appropriate technique for this research framework.

4.2. Results

To analyze the estimations of brand performance outputs, market share was regressed on brand equity, marketing investment, price, firm type, and innovation. The basic model has been described in a formal econometric manner with equation 2, in section 4.1. Models M1, M2 and M3 represent the extension of the basic model and are reported in Table 1.

The core research theme in this study is to understand *which variables* explain the brand performance outputs, and *how* the variables do so. Model 1 represents the control variables of the model and we use it to establish its basic performance. Model M2 includes the independent variables and the model shows the acceptable fit between variables. The results indicate that brand equity, marketing investment in a brand, price, and innovation type have a high statistical effect on market share ($p<.01$). The Italian brands have no statistical significance on market share. The goodness-of-fit tests show that M2 has good predictive potential because the R-squared value is 0.26 and the adjusted R-squared value is 0.25. Surprisingly in M3, marketing investments and firm type have no statistical significance and influence on market share. This perspective conforms to Demma's (2004) assertion that marketing investments often bear no measurable relationship to market impact. However, the lack of statistical significance for marketing investments is surprising given Sheth and Sisodia's (2002) assertion that marketing investments are important to the development of BEq. An explanation for these contradictory findings is offered by Barney (1991). He noted that all firms are different because they do not have the same history, the same experiences, the same organizational culture, or the same assets and abilities. Thus, marketing investments and their market-based performance outcomes will differ from one firm to another. The model shows a better fit in comparison to M2, where the R-squared value is 0.28 and the adjusted R-squared value is 0.27.

{TAKE IN TABLE 1}

We used a class of Monte Carlo simulation algorithm to test the parameters of our model for their consistency and robustness. Further, we apply *estimp* simulation algorithm by King et al. (2000) to simulate the performance of $\hat{y}$ based on random draws from the multivariate distribution of the model under the study. Mean values of the simulated estimates of regression coefficients show the effect of outcome on experimentations. The results of experimentation revealed that the standard deviation increases to 1000 simulated observations.

{TAKE IN TABLE 2}

Akaike's information criterion (AIC) and the Bayesian information criterion (BIC) were used to compare the fit and complexity of competing models (Akaike, 1974). The modeling practice suggests that a model with a better fit will have the smallest value of the AIC and BIC. Results reveal that AIC (960.02) and BIC (918.62) are the smallest for the model M3. These results indicate that M3 outperform alternative models in model fit. The conventional information criteria analysis assumes positive signs for AIC and BIC as well as negative signs for LL and LR analysis. However, that is a common misconception because there is no theoretical or practical reason to validate information criteria by the direction of the sign.

A well-known problem in econometrics and marketing modeling is the possibility of reverse causality (Davcik and Sharma, 2015). We applied the Hausman specification test (Hausman, 1978; Wooldridge, 2001) to avoid potential endogeneity concerns linked to the effects of brand equity and marketing investments on market share. We have found that among estimators ($\chi^2_{df=7}$ 19.88; p > .95) have no statistical difference. This result implies that the hypothesized regression approach can be applied and the endogeneity issues will not cause the model misspecification.

A cluster analysis has been conducted to explain the relationship between quality-independent variables and dependent variables. The brand share cluster profiles for the innovation type indicates

that four clusters exist in the enriched-food market. The brand share sample has 753 brands; 218 brands in cluster 1, 26 in cluster 2, 293 in cluster 3 and 216 in cluster 4. These results suggest that cluster 3 has the highest brand share, even though it was not possible to assess information on the profitability of these brands due to the proprietary nature of the data.

The brand share frequencies are reported according to innovation type. The biggest cluster group represents functional brands, with 38.9% of brands in the enriched-food sector. Organic brands have a share of 29% and conventional brands have a brand share of 28.7%. These results indicate that functional brands represent the biggest brand share group in the Italian market. The brand share cluster profiles by firm type indicate that four clusters exist in the enriched-food market. The brand share sample has 753 brands; in cluster 1 there are 134 brands, in cluster 2 there are 32, and in clusters 3 and 4 there are 116 and 471 brands, respectively. The brand share frequencies are presented according to firm type. The Italian SMEs represent the biggest cluster group with 62.5 percent of brands in the enriched-food sector. Similarly, private-label and MNC brands have small brand shares of 15.4 percent and 17.8 percent respectively. From the above-presented estimations, we conclude that Italian SMEs represent the biggest brand share group in the Italian market.

5. Discussion

This study has investigated the role of DMC in affecting market share performance. In line with Kozlenkova et al.'s (2014) suggestions, we have taken several steps toward a formal evaluation of the brand capability and firm performance relationship. First, we demonstrated through cluster analysis that different levels of innovativeness in the intra-firm competition, among different competitors, show unexpected patterns of performance in the DMC context. In doing so, we advance the literature on the relative effects of market-based resources (e.g., brands) on firm performance. We did so by empirically examining the effects of a firm's assets and branding on

their market share performance. We reinforce the prevailing DMC paradigm that a firm's market share performance is contingent on the correct deployment of their strategic resources and assets. This paradigm represents a possible new avenue for the theoretical enhancement of DMC and marketing research because managers in the multi-brand firms do not assign the equal amount of resources and attention to individual brands. Therefore, our results suggest that understanding the differences in the internal distribution of resources within the brand portfolio and their effects on performance outcomes is of the utmost importance for a firm. Our finding is in line with Davcik and Sharma's (2016) assertation that the current DMC research in the literature is focused on the *inter-firm competition* and future research should expand DMC research toward *intra-firm dynamics and competition*. An important tool is the brand differentiation approach that distinguishes intra-firm allocation of assets and resources on a firm's brand portfolio. For instance, our finding that marketing investment differs between firms types contradicts prevailing management literature that asserts positive effects on brand equity. However, all firms are different because they have different history, experiences, organizational culture, assets, and management abilities (cf. Barney, 1991). Thus, firms in the same sector and country differ from each another and their market performance is even more manifested by application of different innovative solutions.

Second, we contribute to the understanding of the brand competitive dynamics. The lack of empirical research in this stream of the research was addressed by Barney (2014), who laments the recent paucity of brand based explanations for superior firm performance in management and marketing literature. In doing so, our research contributes to the discourse on firm performance by demonstrating the relationship that brand competitive dynamics play in enhancing market-driven firm performance. To address this gap in the literature, we showed how DMC, such as brand equity and marketing investments may drive innovation, which in turn drives new product development. To further exemplify this point, as Prahalad and Hamel (1990) assert, firms do not compete on new products, but rather on factors that expand the capacity to develop new products.

The results of M3 strongly suggest that a firm can leverage marketing investments only if such investments are associated with a strong brand, that is, a brand with high brand equity. This finding is somewhat counter intuitive because prevailing marketing logic would suggest positive and significant interrelationships. The reason might be in the unequal intra-firm distribution of assets and resources. In the multi-brand firm (as it is the case in the current study), a management focuses their investments and value development efforts on leading and/or the most prominent brands. This implies that managers must develop better analytical tools and capabilities to be able to measure and assess the individual contribution of each brand in their portfolio. The use of syndicated data, as it is the case in this study, is a good way to better understand the market forces. However, the use of firm's full potential in competitive intelligence requires deeper understanding how the distribution of internal resources and application of different technologies contribute to the performance of the multi-brand portfolio in the market, where diverse firms in their sizes and organizations fight for the same consumer.

Our research is important for practitioners and scholars in the food industry because it provides evidence of the effective use of marketing assets and capabilities in developing their brand portfolio. We have shown that food firms can develop a successful brand strategy to sustain market share performance. This strategy must be based on quality appeals, managerial involvement, production standards, and product innovation that will differentiate their brands in highly competitive and mature FMCG markets.

This study has several limitations that can be addressed in future research. The objective limitation of the research is the scope and availability of data used. We were able to use only data that was collected and made available by the syndicated services from market research agencies. For instance, future studies can synthesize additional marketing related capabilities and value creation assets (e.g., marketing communications, logistics factors) and non-marketing related

capabilities (e.g., supply chain management, managerial decision-making approaches) to develop a more robust model for examining firm performance.

Similarly, future work could address the heterogeneity of DMC drivers and the development of a firm's intangible offerings. In a broad context, products are either tangible (i.e. goods) or intangible (i.e. services) (Kotler and Keller, 2012). DMC build, integrate, or reconfigure operational capabilities. From a service innovation viewpoint, an important challenge facing firms is how to configure their service offerings and integrate their development into other organizational capabilities to deliver superior brand performance output, given the variable (that is, hard to standardize) nature of services. From a branding point of view, further investigation of brand performance between FMCG and durable goods is a must. DMC and market conditions are very different for these two types of brands. The research shall address the intra-firm resource and brand portfolio challenges and/or opportunities for the further development of a firm in the FMCG or durable goods sector.

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TABLES

Table 1: Estimations of the variables in the brand performance models

Variables	Model 1	Model 2	Model 3
brand (market) share	*Dependent*	*Dependent*	*Dependent*
brand equity (log)		-0.1627** (3.62)	-1.0876** (4.74)
marketing investment (log)		0.4982** (10.35)	-0.0326 (0.24)
brand equity * marketing investment			1.350** (4.11)
dummy company type – Italian	0.0405 (0.89)	0.0038 (0.09)	0.0392 (0.90)
dummy company type – foreign	0.0574 (1.17)	-0.1126** (2.34)	-0.0760 (1.57)
dummy innovation type – organic	0.0912** (2.25)	0.1244** (3.25)	0.1541** (4.00)
dummy innovation type – functional	0.232** (5.64)	0.1419** (3.47)	0.1571** (3.87)
price	-0.2366 (6.23)	-0.1805** (4.95)	-0.1675** (4.62)
R^2	0.1287	0.2589	0.2757
adjusted R^2	0.1229	0.2517	0.2677
Prob> F	0.000	0.0000	0.0000
df	5	7	8
AIC	-866.26	-945.14	-960.02
BIC	-838.46	-908.34	-918.62
LL	386.77	370.49	370.49
LR	439.13	480.57	489.01

Notes: Beta coefficients, ** significant at 5% (p < .05)
t-statistics appear in parenthesis

Table 2: Monte Carlo simulations – mean and standard deviation values

Number of simulated observations	Brand equity		Marketing investment		Interaction effect	
	mean	standard deviation	mean	standard deviation	mean	standard deviation
100	0.614	0.121	0.016	0.093	0.037	0.008
500	0.624	0.129	0.024	0.099	0.038	0.009
1000	0.623	0.135	0.025	0.105	0.037	0.009
5000	0.619	0.132	0.023	0.102	0.037	0.009
10000	0.622	0.131	0.024	0.102	0.037	0.009